

Exercise 1 Let's discuss some of the properties of the tangent function.

- (a) Recall that the sine function is odd and the cosine function is even. Using the fact that $\tan(x) = \frac{\sin(x)}{\cos(x)}$, we can deduce that tangent is

Multiple Choice:

- (i) odd. ✓
- (ii) even.
- (iii) neither odd nor even.

- (b) Recall that the tangent function has period π . Using the fact that $\tan\left(-\frac{\pi}{3}\right) = -\sqrt{3}$, answer the following questions.

What is $\tan\left(\frac{2\pi}{3}\right)$?

Multiple Choice:

- (i) $\sqrt{3}$
- (ii) $-\sqrt{3}$ ✓
- (iii) 3
- (iv) -3
- (v) -1.72

What is $\tan\left(\frac{\pi}{3}\right)$?

Multiple Choice:

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 - (ii) $-\sqrt{3}$
 - (iii) 3
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 - (v) -1.72
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